WHAT IS CLAIMED IS:

1. A class D amplifier comprising:

a pulse modulator for generating a pulse modulated signal;

a correction circuit for correcting a feedback signal input thereto by feedback in reference to said pulse modulated signal; and

a power switch for generating a voltage signal on the basis of a correction signal output from said correction circuit, wherein

said feedback signal is generated on the basis of said voltage signal, and

said correction circuit includes:

a first integrator for performing integration on the basis of said pulse modulated signal;

a second integrator for performing integration on the basis of said feedback signal; and

a comparator for comparing a first integrated signal output from said first integrator and a second integrated signal output from said second integrator, thereby generating said correction signal in correspondence with the result of comparison.

2. The class D amplifier according to claim 1, wherein

said correction circuit further includes:

a gain controller for controlling gain of said first integrated signal;

a first subtracter for obtaining a difference between an output signal from said gain controller and said pulse modulated signal, thereby generating a first differential signal to be input to said first integrator; and

a second subtracter for obtaining a difference between said output signal from

said gain controller and said feedback signal, thereby generating a second differential signal to be input to said second integrator.

3. A class D amplifier comprising:

a pulse modulator for generating a pulse modulated signal;

a correction circuit for correcting a feedback signal input thereto by feedback in reference to said pulse modulated signal; and

a power switch for generating a voltage signal on the basis of a correction signal output from said correction circuit, wherein

said feedback signal is generated on the basis of said voltage signal,

said correction circuit includes:

a first integrator for performing integration on the basis of said pulse modulated signal;

a second integrator for performing integration on the basis of said feedback signal;

a first subtracter for obtaining a difference between a first integrated signal output from said first integrator and a second integrated signal output from said second integrator;

a third integrator for integrating a first differential signal output from said first subtracter;

a reverser for reversing a third integrated signal output from said third integrator; and

a comparator for comparing said first differential signal and said third integrated signal as reversed by said reverser, thereby generating said correction signal in correspondence with the result of comparison.

4. The class D amplifier according to claim 3, wherein

said correction circuit further includes:

a gain controller for controlling gain of said first integrated signal;

a second subtracter for obtaining a difference between an output signal from said gain controller and said pulse modulated signal, thereby generating a second differential signal to be input to said first integrator;

a third subtracter for obtaining a difference between said output signal from said gain controller and said feedback signal, thereby generating a third differential signal to be input to said second integrator.

5. The class D amplifier according to claim 1, further comprising

a feedback circuit for attenuating an amplitude of said voltage signal generated in said power switch and outputting said feedback signal to be input to said correction circuit.

6. The class D amplifier according to claim 3, further comprising

a feedback circuit for attenuating an amplitude of said voltage signal generated in said power switch and outputting said feedback signal to be input to said correction circuit.

7. The class D amplifier according to claim 1, wherein

a constant for gain of said first integrator and a constant for gain of said second integrator are equal to each other.

8. The class D amplifier according to claim 3, wherein

a constant for gain of said first integrator and a constant for gain of said second integrator are equal to each other.

9. A class D amplifier comprising:

a power switch for switching on/off a power supply supplying a supply voltage in response to a pulse width modulated signal;

a correction circuit for correcting a pulse width of said pulse width modulated signal to be input to said power switch in accordance with an amplitude of a feedback signal generated from an output of said power switch; and

an arithmetic unit for adjusting said amplitude of said feedback signal to be input to said correction circuit in accordance with a value of said supply voltage.

10. The class D amplifier according to claim 9, wherein

said arithmetic unit includes:

a subtracter for subtracting a reference voltage generated on the basis of a dc component of said supply voltage from said feedback signal; and

an adder for adding a fixed dc voltage to an output of said subtracter, wherein

an output of said adder is input to said correction circuit.

11. A class D amplifier comprising:

a power switch for switching on/off a power supply supplying a supply voltage in response to a pulse width modulated signal; and

a correction circuit for correcting a pulse width of said pulse width modulated signal to be input to said power switch in accordance with an amplitude of a feedback

signal generated from an output of said power switch, wherein

said correction circuit includes:

a first integrator for integrating said pulse width modulated signal;

a second integrator for integrating a difference between said feedback signal and a reference voltage generated on the basis of a dc component of said supply voltage; and

a comparator for comparing outputs of said first and second integrators, and

an output of said comparator is input to said power switch.

12. The class D amplifier according to claim 11, wherein

said second integrator includes an operational amplifier having a reverse input terminal and a non-reverse input terminal, said feedback signal being input to said reverse input terminal through a first resistor and said reference voltage and a fixed voltage being applied to said non-reverse input terminal through second and third transistors, respectively.

13. The class D amplifier according to claim 11, wherein

said second integrator includes an operational amplifier having a reverse input terminal and a non-reverse input terminal, said feedback signal and said reference voltage as reversed being applied to said reverse input terminal through first and second resistors, respectively, and a fixed voltage being applied to said non-reverse input terminal through a third resistor.

14. A class D amplifier comprising:

a power switch for switching on/off a power supply supplying a supply voltage

in response to a pulse width modulated signal;

a correction circuit for correcting a pulse width of said pulse width modulated signal to be input to said power switch in accordance with an amplitude of an output signal of said power switch;

a level reference signal generator for generating a level reference signal from said supply voltage; and

a level adjusting circuit for adjusting an amplitude of said pulse width modulated signal to be input to said correction circuit in accordance with a value of said level reference signal.

15. A class D amplifier comprising:

a pulse modulator for modulating a pulse width of an input signal to output a pulse width modulated signal;

a power switch for switching on/off a power supply supplying a supply voltage in response to said pulse width modulated signal;

a correction circuit for correcting a pulse width of said pulse width modulated signal to be input to said power switch in accordance with an amplitude of output signal from said power switch;

a level reference signal generator for generating a level reference signal from said supply voltage;

a modulation index control signal generator for generating a modulation index control signal from said supply voltage;

a level adjusting circuit for adjusting an amplitude of said pulse width modulated signal to be input to said correction circuit in accordance with a value of said level reference signal; and

a modulation index adjusting circuit for adjusting a modulation index in said pulse modulator in accordance with a value of said modulation index control signal.

16. The class D amplifier according to claim 14, wherein

said level reference signal generator includes:

a low pass filter for removing a high frequency component from said supply voltage; and

an attenuator for attenuating an output of said low pass filter.

17. The class D amplifier according to claim 15, wherein

said level reference signal generator includes:

a low pass filter for removing a high frequency component from said supply voltage; and

an attenuator for attenuating an output of said low pass filter.

18. The class D amplifier according to claim 15, wherein

said level reference signal generator also serves as said modulation index control signal generator.

19. The class D amplifier according to claim 15, wherein

said modulation index adjusting circuit includes:

an A/D converter for converting said modulation index control signal into a digital signal;

a multiplying coefficient generator for generating a multiplying coefficient in accordance with a value of said digital signal output from said A/D converter; and

a multiplier for multiplying a signal input to said pulse modulator with said multiplying coefficient.

20. The class D amplifier according to claim 14, wherein

said level reference signal generator outputs a voltage having a fixed value as said level reference signal in a band where said supply voltage is lower than a preset value, and outputs a voltage having a value increased over said fixed value with increase in said supply voltage, as said level reference signal, in a band where said supply voltage is equal to or higher than said preset value.

21. The class D amplifier according to claim 15, wherein

said level reference signal generator outputs a voltage having a fixed value as said level reference signal in a band where said supply voltage is lower than a preset value, and outputs a voltage having a value increased over said fixed value with increase in said supply voltage, as said level reference signal, in a band where said supply voltage is equal to or higher than said preset value.